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Radix-2 trellis with four states, digital transmission
Example: Branch metric ZM=[2-Hamming distance (s,e)]

Original sequence	0	1	1	0	...
Transmission sequence	00	11	01	01	
Reception sequence	00	11	01	01	

e (1)

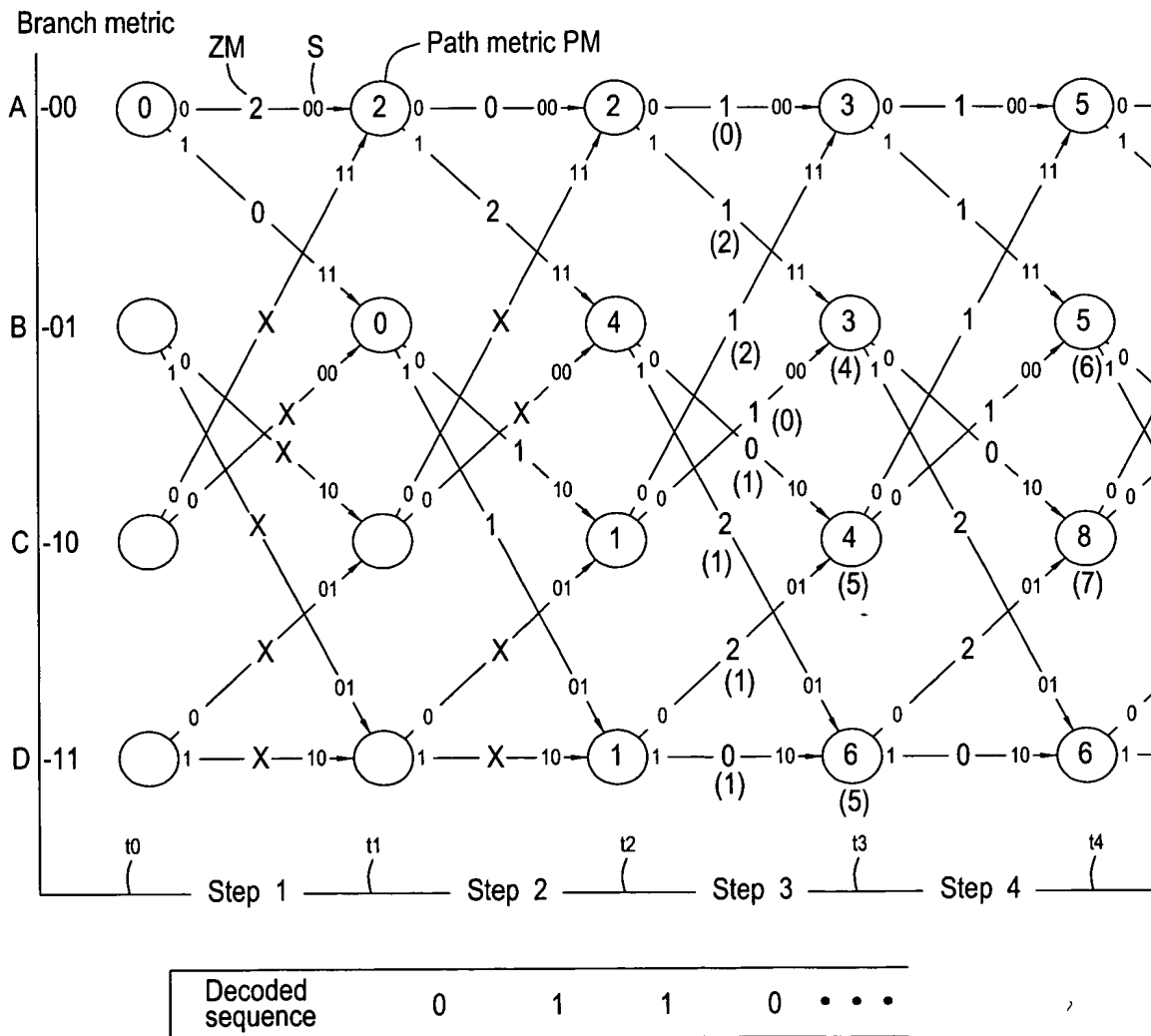


FIG. 1

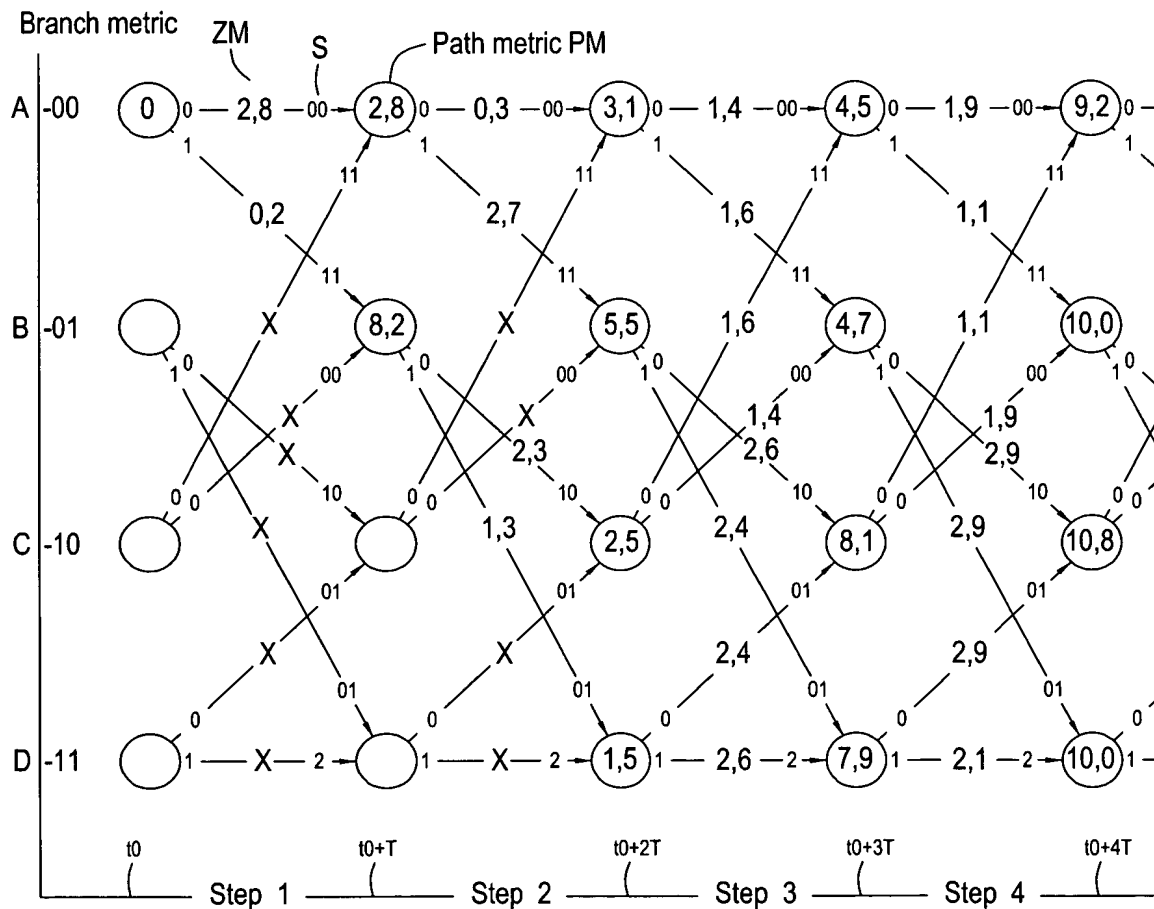
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Radix-2 trellis with four states, analog transmission

Example: Branch metric ZM=3- (s,e)

Original sequence	0	1	1	0	• • •
Output sequence	00	11	01	01	
Transmission sequence	0	3	1	1	
Reception sequence	0,2	2,7	1,6	1,1	

e



Decoded sequence	0	1	1	0
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FIG. 2

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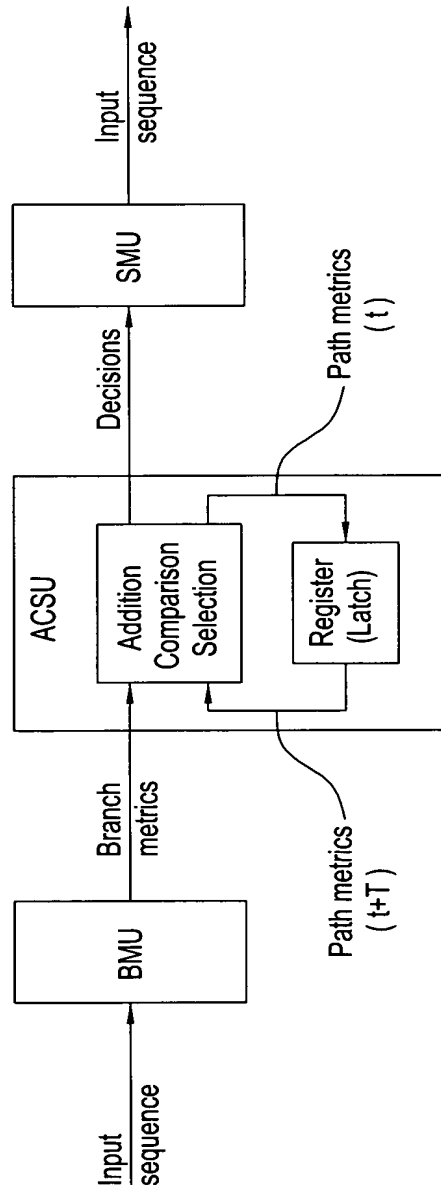


FIG. 3

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Radix-2 trellis with four states, digital transmission
Example: Branch metric ZM=[4-Hamming distance (s,e)]

Original sequence	0	1	1	0	...
Output sequence	00	11	01	01	
Reception sequence	00	11	01	01	

e

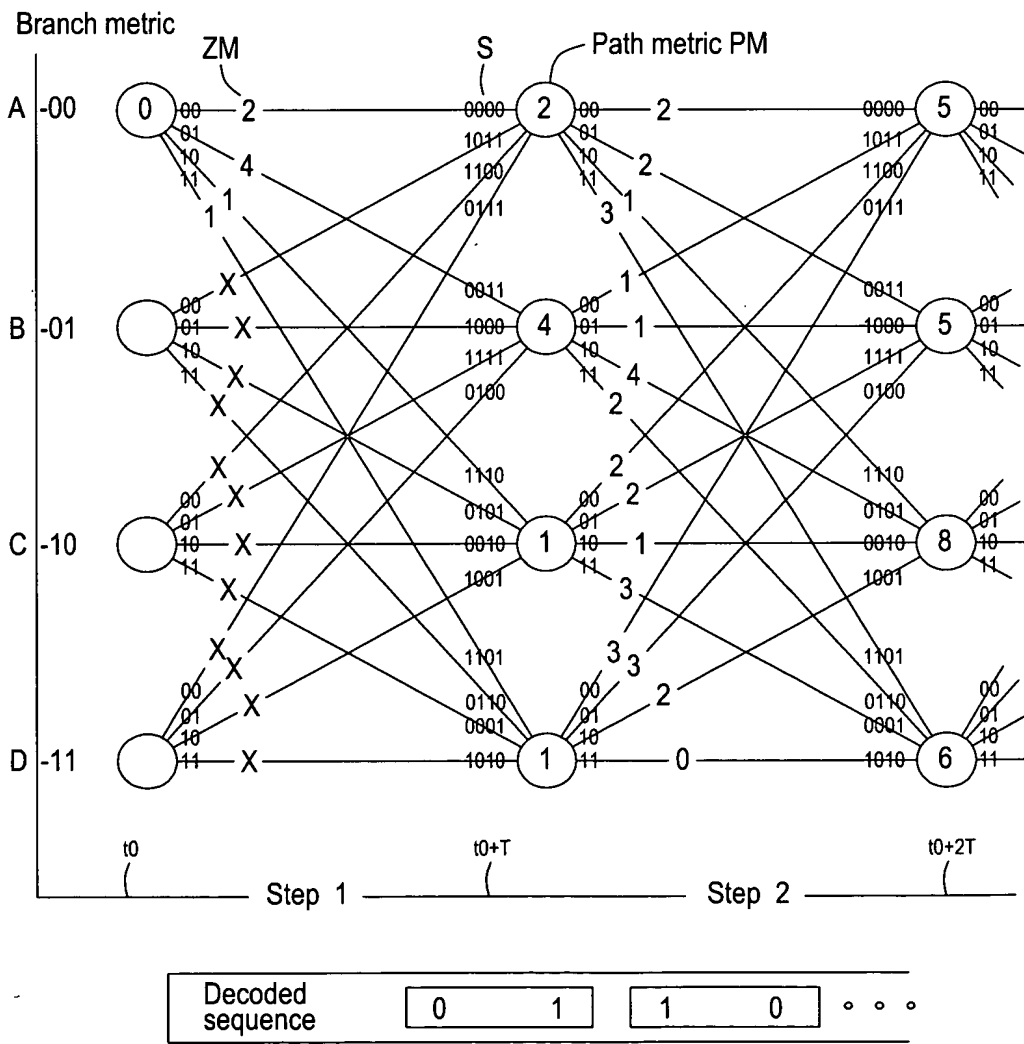


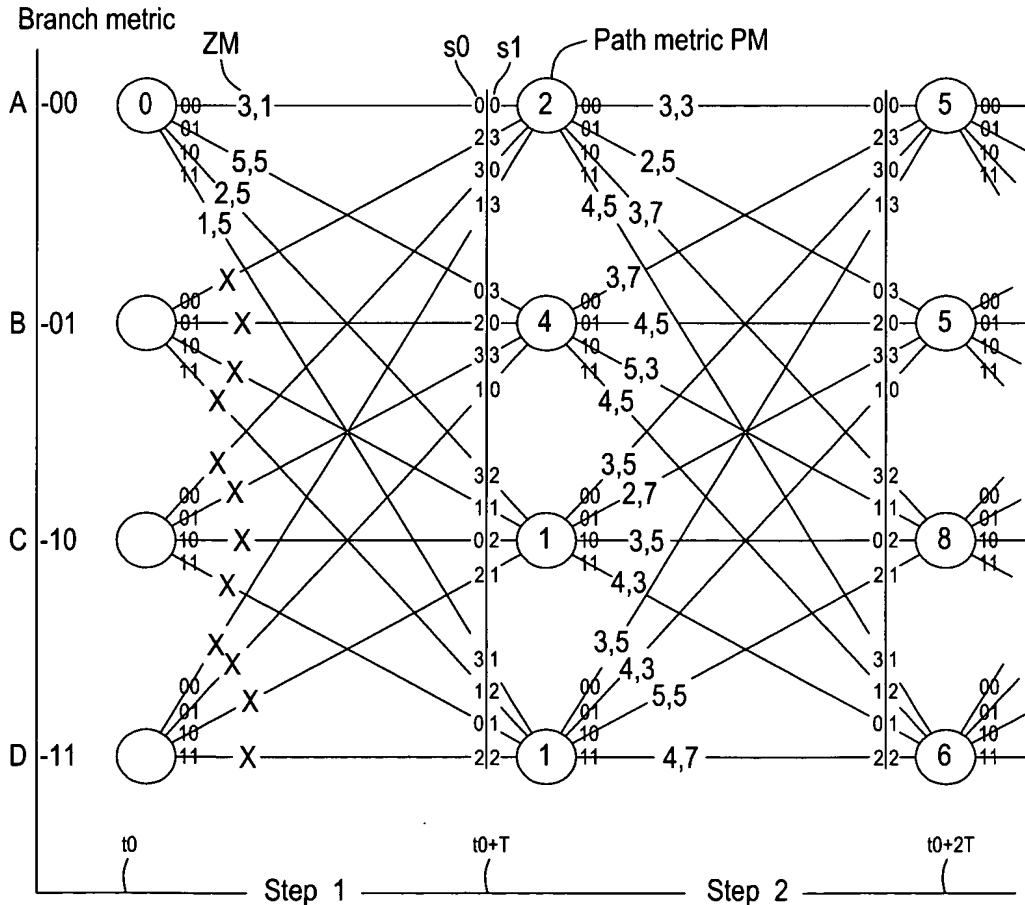
FIG. 4

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Radix-4 trellis with four states, analog transmission

Example: Branch metric $ZM=6(|e0-s0|+|e1-s1|)$

Original sequence	0	1	1	0	...
Output sequence	00	11	01	01	
Transmission sequence	0	3	1	1	
Reception sequence	0,2	2,7	1,6	1,1	
	e0	e1	e0	e1	



Decoded sequence	0	1	1	0	...
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FIG. 5

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Radix-4 trellis with eight states

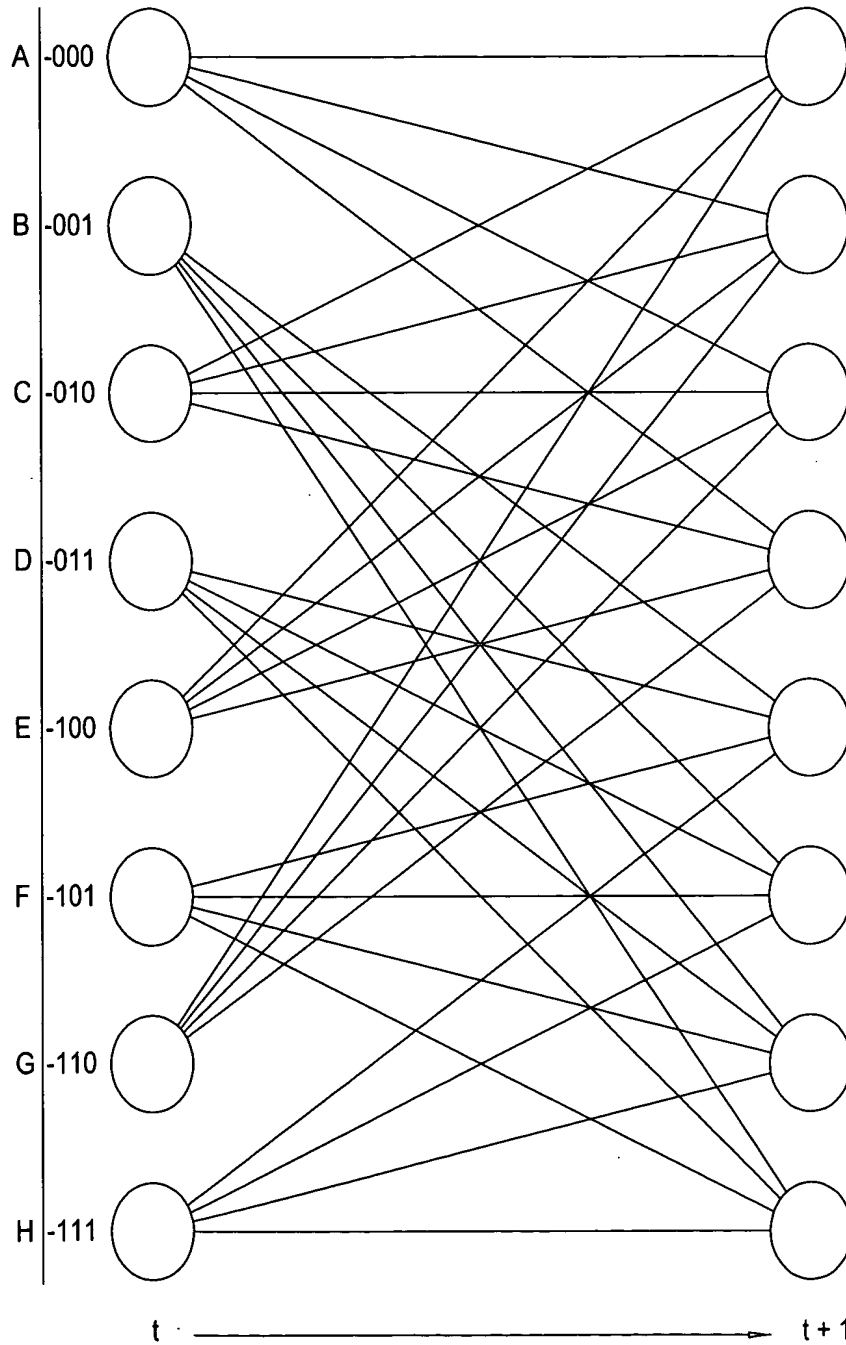


FIG. 6

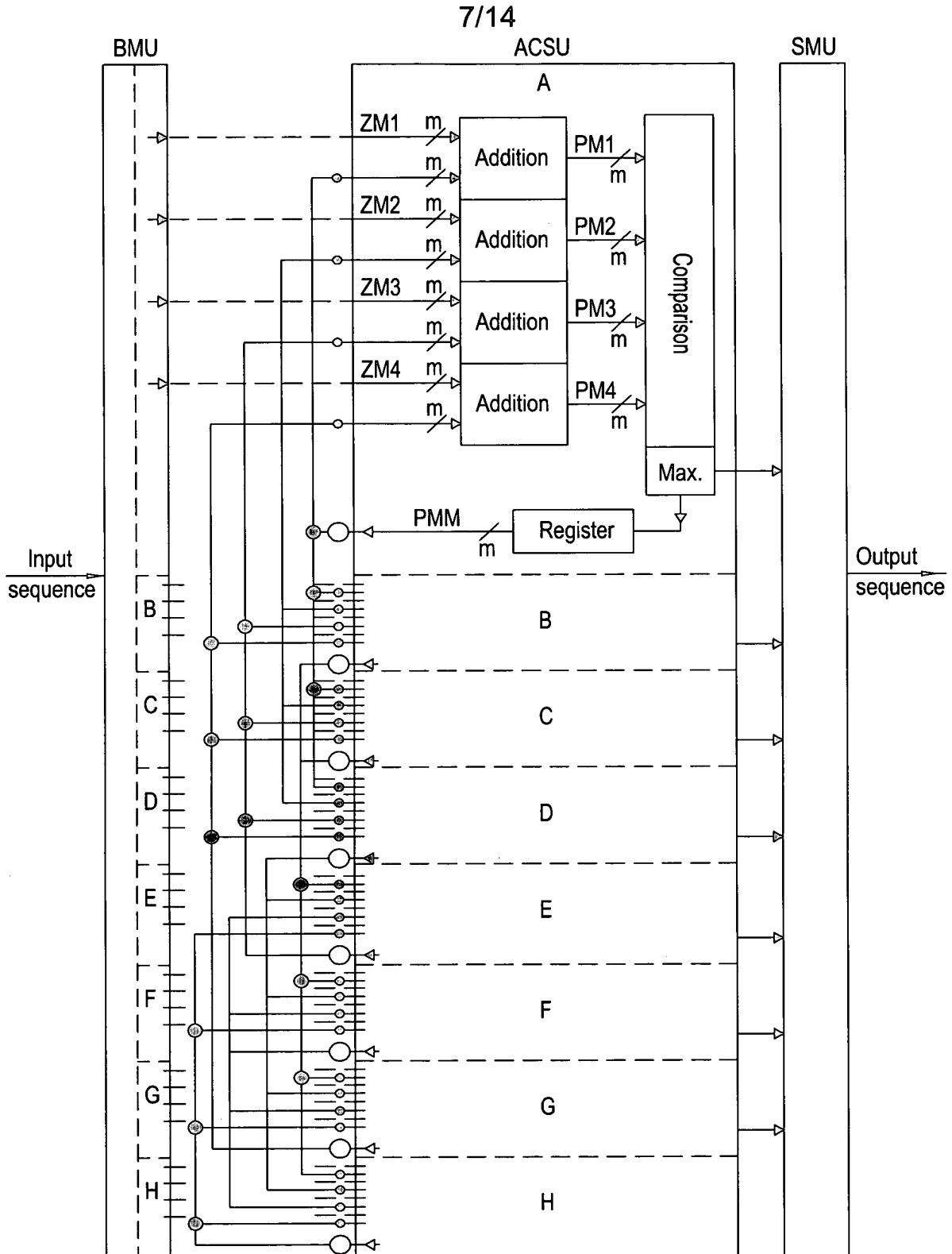


FIG. 7

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ACSU Section A from Figure 7

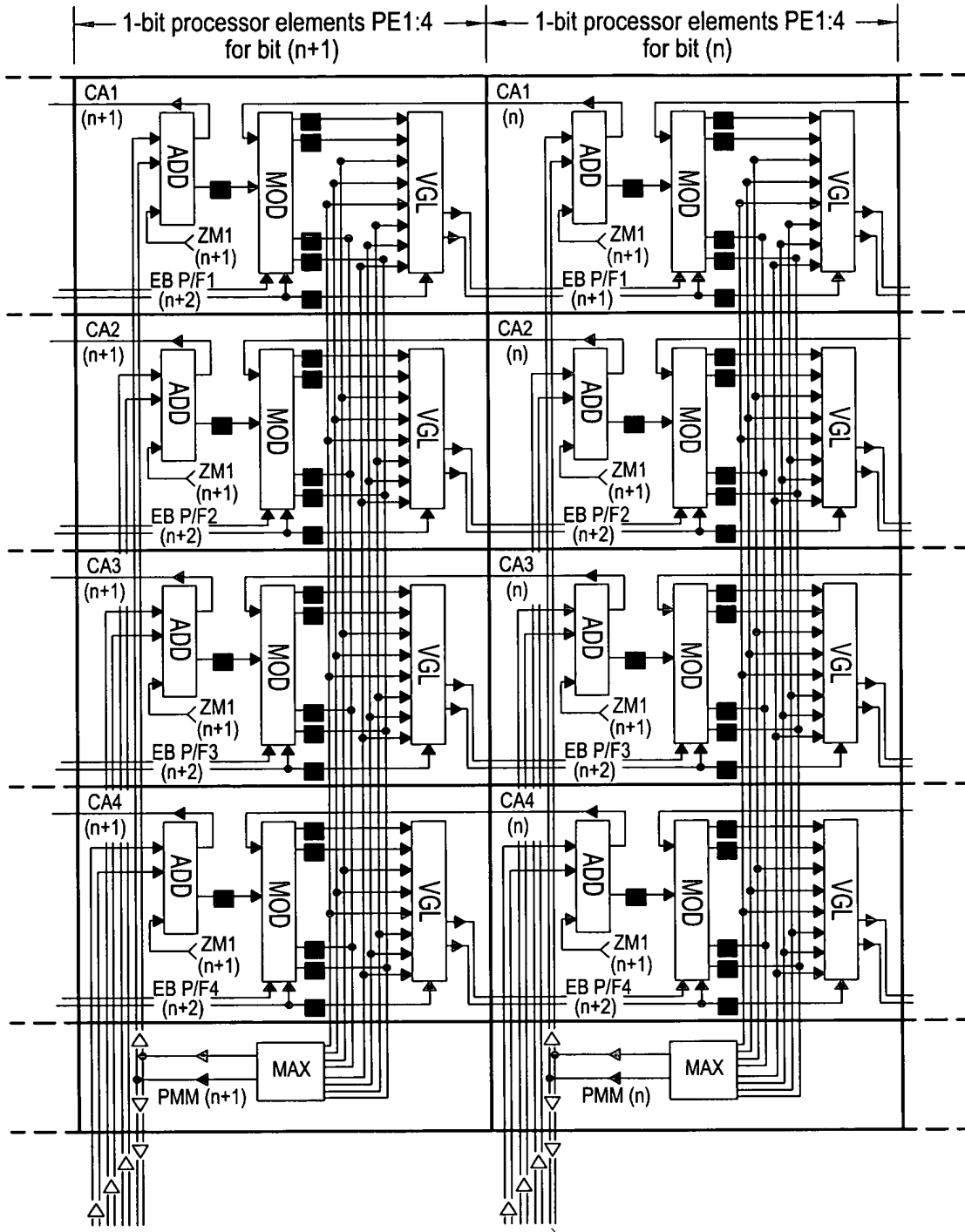
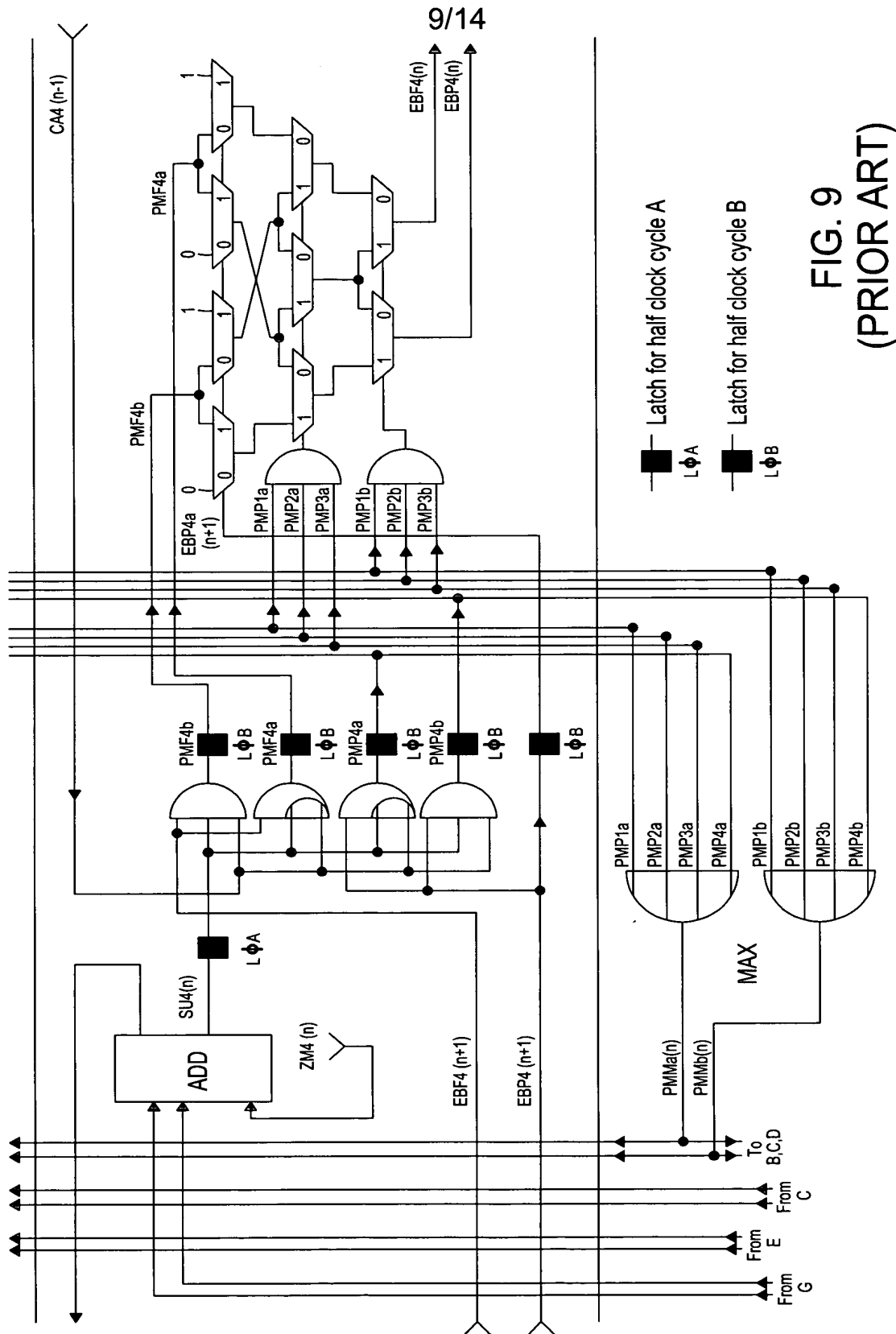


FIG. 8
(PRIOR ART)



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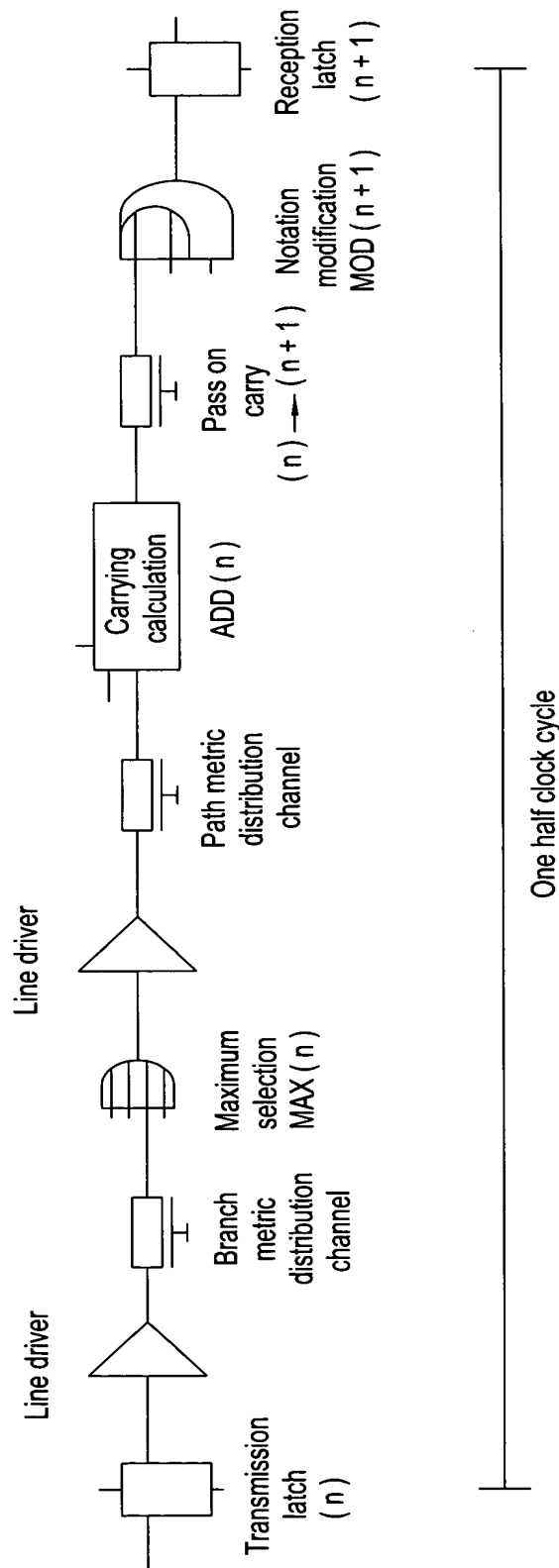


FIG. 10
(PRIOR ART)

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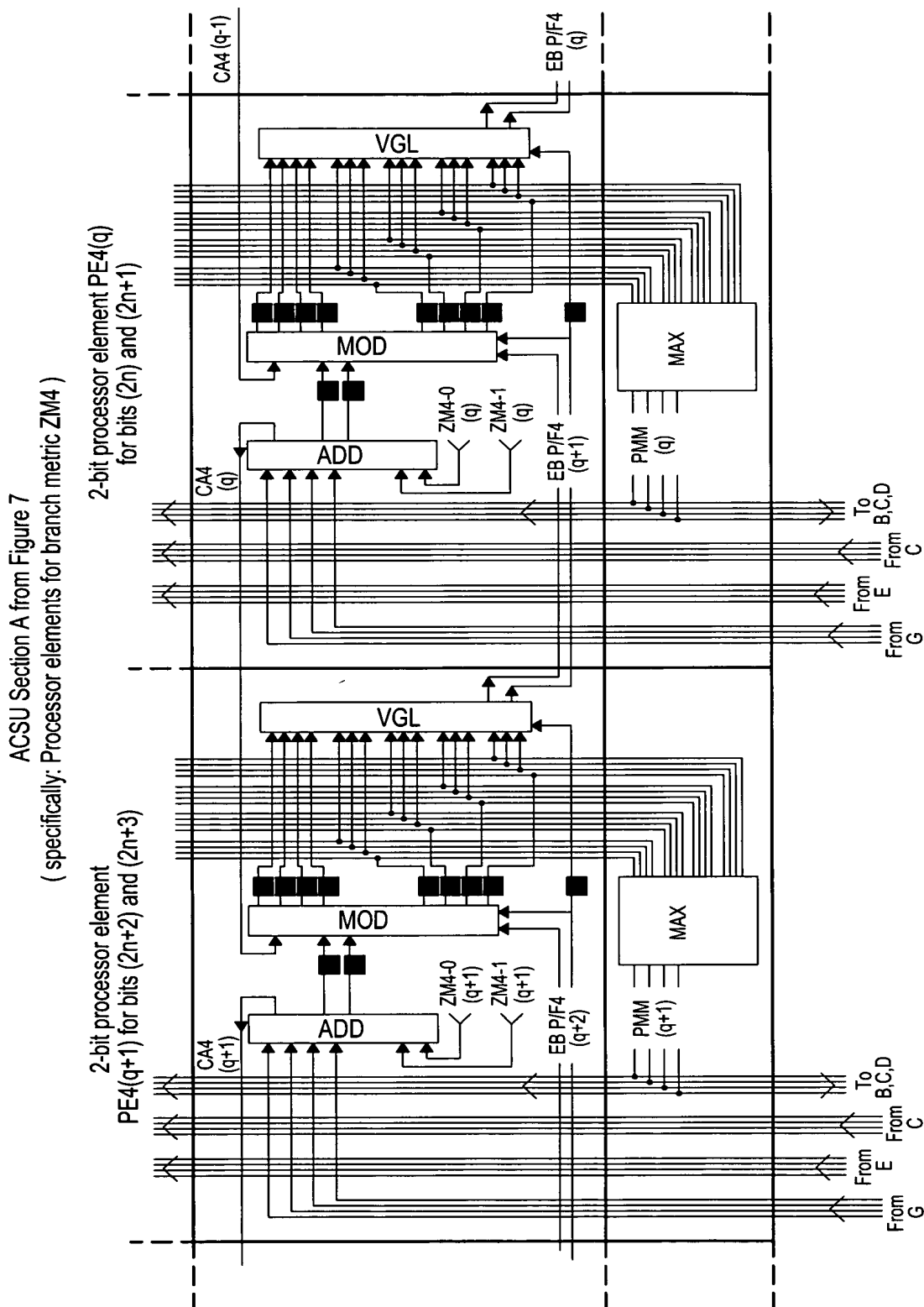


FIG. 11

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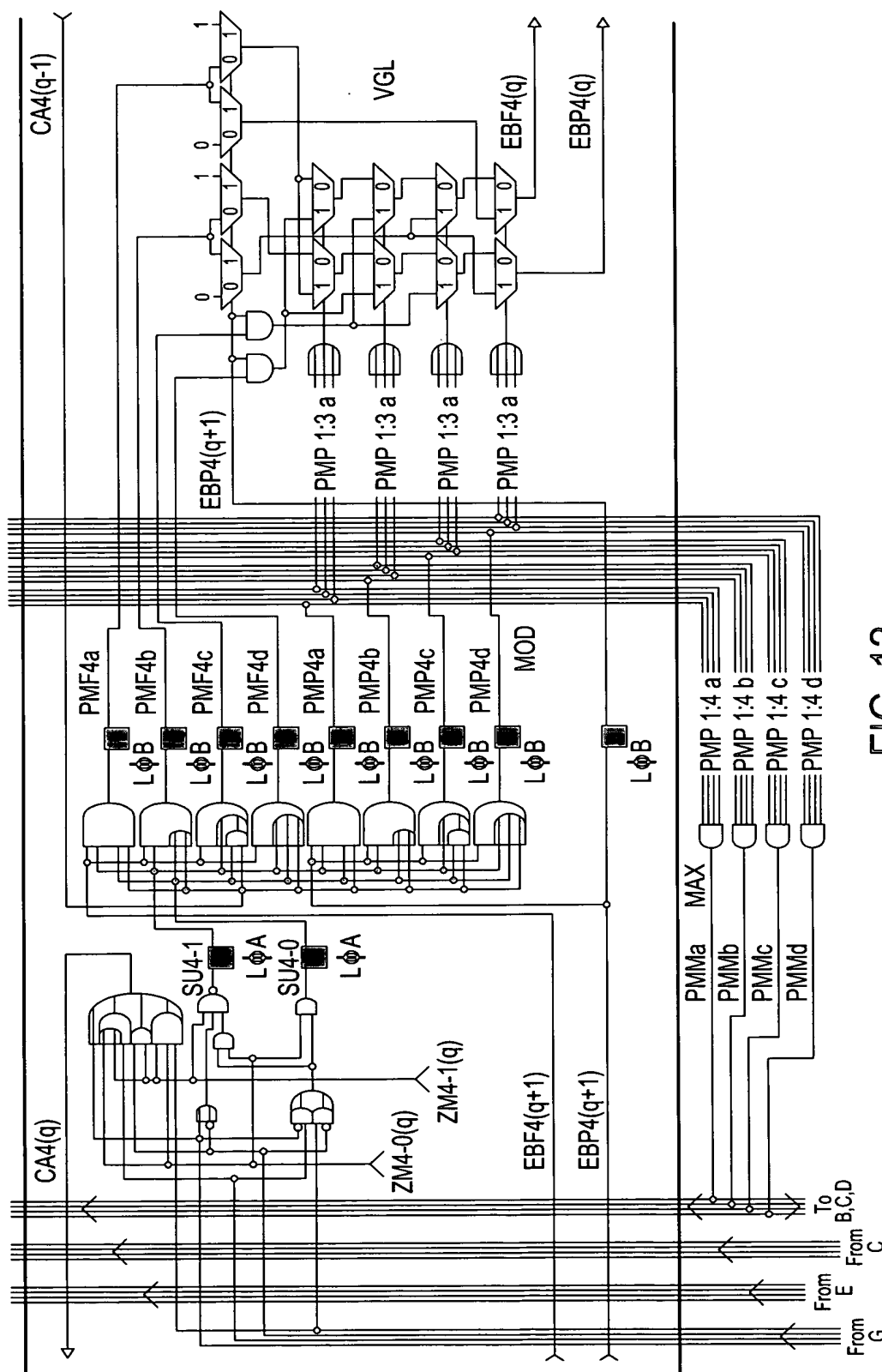


FIG. 12

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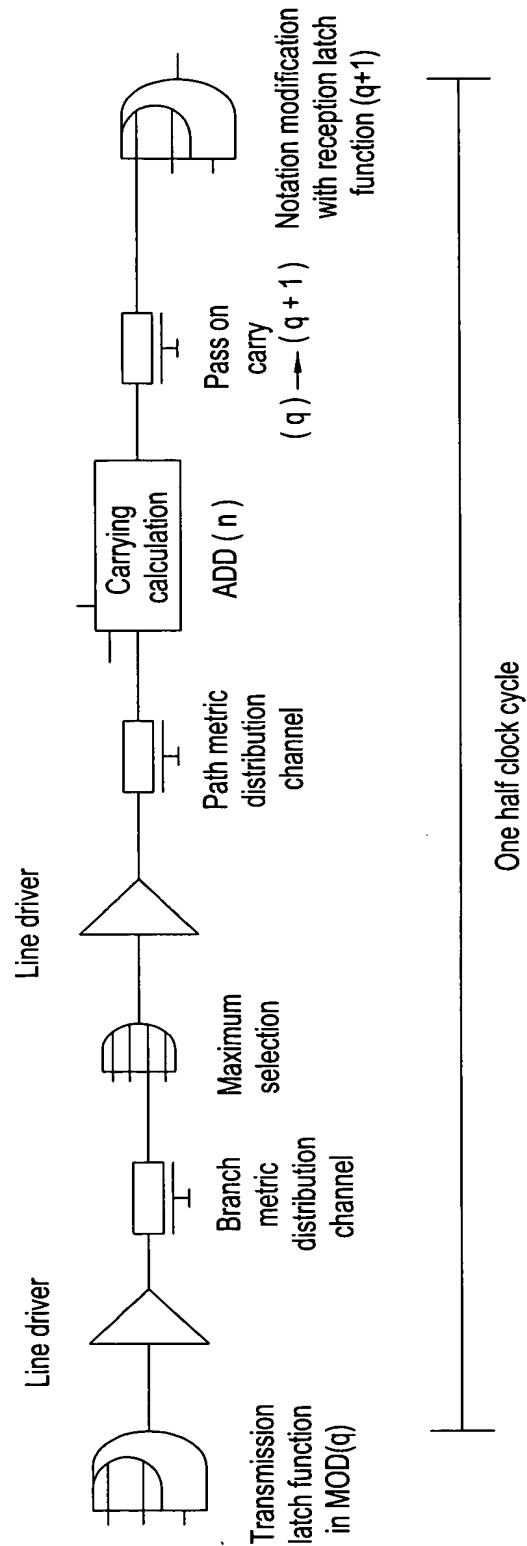


FIG. 13

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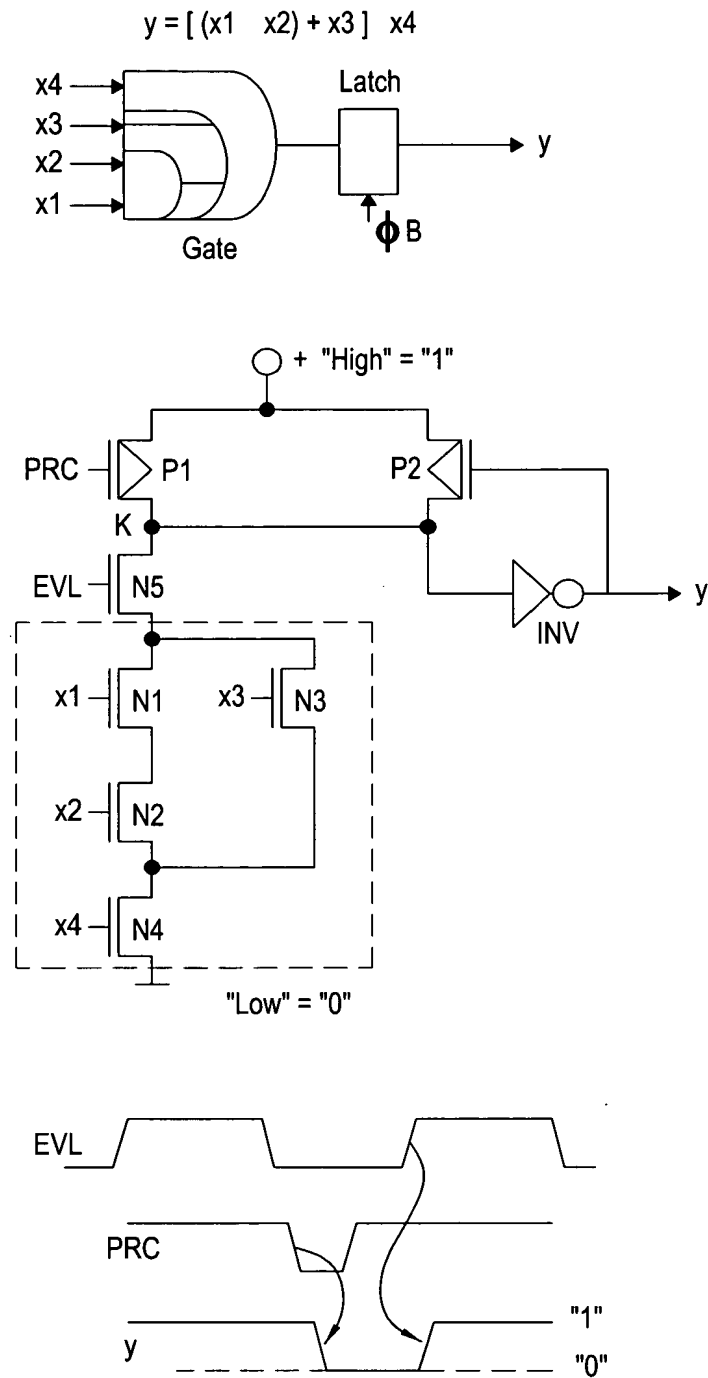


FIG. 14